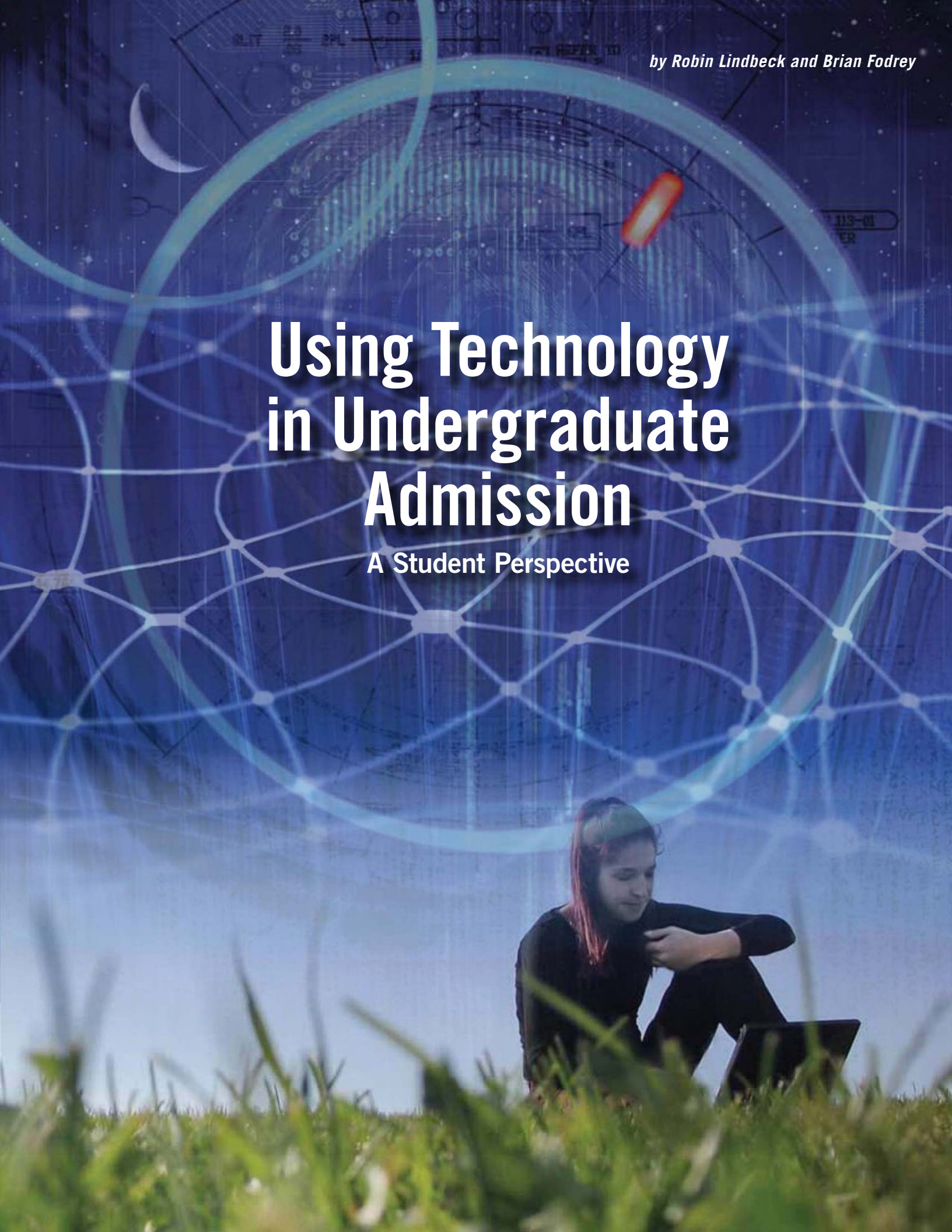
by Robin Lindbeck and Brian Fodrey

Using Technology in Undergraduate Admission

A Student Perspective



Introduction

The relationship that currently exists between undergraduate admission, technology and the Millennial generation continues to be an area of constant change. As technology trends come-and-go and resources continue to be limited, what are colleges and universities doing to ensure they are being as effective and efficient as possible when it comes to recruiting students through technological means or otherwise? Regardless, one thing remains certain: admission departments all over the country are actively engaged with the use of technology, yet few have confidence they are fully benefiting from its presence (Lindbeck and Fodrey 2009). One crucial perspective, in particular, remains to be fully captured—that of the prospective student.

A survey conducted by Noel-Levitz (2009) found that 88 percent of college-bound prospective students would be disappointed or possibly eliminate a school from consideration if the institution's Web site did not meet their expectations. This overwhelming majority emphasizes the impact technology can have on student recruitment. When expanding upon this study, other critical questions pertaining to the perspective of Millennial generation prospective students must be addressed. First, what technologies (other than institution Web sites) could or should be used when attempting to connect with college-bound seniors? Next, how do these technologies play to the perceptions of what is valuable or influences a prospective student's decision to attend a particular college or university? Lastly, what types of information are Millennial students expecting to see via these technologies? Answering these questions will help us better understand the complexities and potential opportunities associated with connecting to this new generation of college students.

Literature Review

Characteristics of the Millennial Generation

The Millennial generation represents a collection of "smart, practical and techno-savvy" people who are characterized by shared common life experiences that will ultimately influence how they impact the world for many years to come (Lancaster and Stillman 2002). Born in 1982 through 2000, the Millennials have been shaped by the times they have lived and are already demonstrating they are equal to the task of inheriting the world we live in today (Raines 2002). Their constant need to be connected to their social pipelines, have access to digital information and collaborate with their peers demonstrates that this generation is ready to have its voice heard, share its ideas and lead by actions (Strauss and Howe 2007).

Living through events such as September 11th, the Columbine shootings and the recent economic collapse, to name a few, Millennials have seen acts of terrorism, heroism, multiculturalism and advocacy, often resulting in a renewed passion for selflessness and believing what is good for one, is often good for all (Raines 2002). Their commitment to stability, equality and a well-balanced life coupled with growing up in fairly prosperous times has given them an enhanced sense of confidence and need for a challenge (Howe and Strauss 2007). Arguably, this generation is the most populous, affluent and diverse of any that came before it (Howe and Strauss 2007). This has kept Millennials fairly successful in life thus far, resulting in numerous doors of opportunity from which to choose. Because of these options, this generation values choice and is menu-driven (Hagevik 1999).

The role of the parent also comes into play when describing this generation. As members of the baby boomer generation, most Millennial parents are without doubt invested and committed to the success and prosperity of their children and are willing

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to go to great lengths to preserve it (Coburn 2006). This appreciation for family has resulted in parents being very protective of their children, and Millennials inheriting a great deal of their parent's beliefs and values (Howe and Strauss 2007). This trend also extends to their children's educational paths, specifically in preparation for college. Parents of Millennials expect to be informed and recruited by higher education institutions just as their college-bound children are or will be (Coburn 2006). Regardless, the relationship between Millennials and their parents is both valuable and indisputable regarding how this generation is scrutinized and the reputation it will bear for many years to come (Elam, Stratton and Gibson 2007).

Admission Practices and the Millennial Generation

It is expected that by the 2016–17 academic year there will be an increase of 26 percent in bachelor's degrees conferred within the United States (Hussar and Bailey 2007). This growth illustrates an incredible opportunity and challenge for admission personnel to reinvent how they recruit college-bound students. Over the years, generalized best practices for how colleges and universities should advertise themselves and engage with today's prospective students have created an emphasis on the following: use of multimedia (whether it is face-to-face or online), simpler Web sites, personalized messages (both in print and electronic) and keeping individualized contact as relevant and practical as possible (Chimes and Gordon 2008). Millennial students often do not express interest in information that is not directly related to what matters to them, nor are they willing to give a second chance at a first impression (Howe and Strauss 2007). As a result, the balance between making a student feel welcomed by an institution and providing them with the information necessary to make an informed decision is a very delicate balance.

Another important aspect of college admission and recruitment practices is the selection of a college marketing campaign (Gastwirth 2007). The notion that simply the presence of technology or other independent admission related activities will be enough to effectively recruit the quality of student most college and universities have come to expect may no longer be enough (Gastwirth 2007). The addition and implementation of business marketing efforts such as cross-promoting, merchandising and interactive promotions is an already familiar and proven strategy with this generation and is still a fairly underutilized practice for many admission departments around the country (Gastwirth 2007). The blending of marketing initiatives and technology not only creates the best use of each resource independently, but also may provide the highest possible return on investment regarding an institution's own time and effort. Yet, most admission departments continue to struggle with successfully integrating these two concepts (Farrell 2007). The reality may be that most leaders are continually getting distracted by trying to keep up with their competitors and allowing technology to drive practices and policies, with little consideration to recruitment conditions or environments (Farrell 2007).

It must also be considered that simply because prospective students are using a particular type of technology as a social outlet, a collegiate transition or "invasion" into that space may not always be the most effective, productive or appropriate course of action. However, this has not slowed some colleges and universities in their efforts to attempt to use these technologies. Though many admission departments believe that despite high levels of technical activity, their perceived return on investment for such efforts continues to be much lower than they expected or preferred (Lindbeck and Fodrey 2009). Regardless, students are still providing favorable ratings for some of these individual technologies. Two recent examples of this include text messaging and social networking Web sites. Though both are used as common social communication tools by the Millennial generation, usage by college recruiters may run the risk of "crashing the digital party" to which they were not invited (Farrell 2007). This indicates that a delicate balance must be struck in order to successfully navigate the rocky terrain of college admission practices, technology and personal boundaries.

Technology and the Millennial Generation

The Millennial generation is currently in the driver's seat for which technologies are valued in the world today and why (Squire and Steinkuehler 2005). Their increased need for readily available information in easily transferable formats has transformed how technologies are being designed and distributed (Squire and Steinkuehler 2005). One specific type of technological framework receiving attention from the Millennial generation is collaboration or user-generated content technologies (i.e., wikis, blogs, social networking). According to a survey conducted by Noel-Levitz (2009) 50 percent of the respondents reported they belonged to Facebook, and 52 percent to MySpace. Conversely, despite many Millennials collaborative and trendy technology preferences, many colleges and universities continue to use one-way (i.e. school Web sites) and more established technologies (i.e., email) in their recruitment strategies (Lindbeck and Fodrey 2009). However, the level of interest by this generation and need to always be connected is becoming increasingly more influential on how they share information electronically. It is changing the way they communicate among themselves, as well as with the world (Howe and Strauss 2007).

Recognizing that this generation is overwhelmingly more technology friendly than its predecessors, the importance of diversifying not only how, but what information is being disseminated by others, may also prove to be insightful. Many Millennials often are cautious in contributing to publicly accessible user-generated content spaces, such as Wikipedia, because of their respect for how and what information should be shared with the world (Rich 2008). This hesitation further illustrates an enhanced sense of legitimacy, often through less formal channels, and accountability acting as a check and balance for how this generation values "open-source" information. Millennials often rely on and value peer-to-peer insight and feedback more so than other generations, as well as look to each other for professional and personal development opportunities (Tucker 2006). As a result, formal technological channels of information seeking are becoming less popular (i.e., Web sites, etc.), with more collaborative repositories taking priority (i.e., blogs, wikis). The challenge presented to admission personnel is using these technologies to funnel and filter information to prospective students in a manner that is not threatening to what they value, but sustainable enough to be useful and effective in delivering the message they desire.

Methods

The purpose of this inquiry was to explore the technologies experienced by prospective students during the undergraduate recruiting process, as well as the student's perspectives on how influential each of the experiences with various technologies were on their decision to enroll. This study used a convenience sample of freshmen at two large state universities in the Midwest. Data were collected through a primarily quantitative online survey that focused on 10 broad categories of technology: cell phones, text messaging, social media, virtual communities, instant messaging, email, blogs, audio content/podcasts, video content/vodcasts, and school Web sites. These categories were further defined by six potential uses of each technology (notification of critical application information and deadlines, building relationship with admission counselors, notification of acceptance, informational (Q&A), virtual tour of campus, and to find out "what's happening" on the campus). Both the broad categories and specific uses were derived from the existing literature on e-recruiting practices (Noel-Levitz 2009) and a recent study looking at technology integration in freshmen recruiting from the perspective of admission offices (Lindbeck and Fodrey 2009).

Results

Survey invitations were emailed to 9,997 freshmen at two state universities in the Midwest region of the United States. Of the 746 students to complete the survey, approximately 60 percent were female, 40 percent were male, and almost 95 percent of the respondents were 18 or 19 years old. Given the small number of respondents, and the likelihood that the institutional inquiries for these students were primarily Midwestern in nature, these results cannot be assumed to be representative of student perceptions nationwide. However, they do present interesting results and potential areas for further study.

Students were asked if they experienced or used a particular technology during the admission process and to rate the usefulness of that technology in selecting an institution. The two technologies experienced by most students were the school Web site and email (Table 1). In fact, school Web sites and email were the only technologies experienced by more than 50 percent of the students. School Web sites and email were also rated the most useful by students. Other technologies were experienced by fewer numbers of students (cell phone, social networking, blogs, and video and audio content) but other than the cell phone, none were experienced by more than 35 percent of the students and all were rated less useful than the school Web site and email. All but three of the uses of technology were rated as at least *somewhat* useful.

Table 1: Top 20 Most Common Technology Uses Experienced by Students during the Admission Process and Perceived Usefulness (n=746)

Technology	Specific use	Percentage of students experiencing	Perceived usefulness (1=None, 2=Some, 3=Very)
Email	Notification of application info & deadlines	89.8%	2.7
School Web site	Notification of application info & deadlines	86.9%	2.8
School Web site	Informational (and forms)	86.5%	2.8
Email	Informational (and forms)	81.1%	2.6
School Web site	Learning "what's happening" on campus	79.0%	2.6
School Web site	Campus tours at a distance	74.0%	2.6
School Web site	Notification of acceptance	65.4%	2.7
Email	Notification of acceptance	64.5%	2.6
Email	Building relationship with counselor	61.7%	2.5
Cell phone	Informational (and forms)	50.0%	2.1
Cell phone	Notification of application info & deadlines	47.6%	1.9
Cell phone	Notification of acceptance	43.7%	2.1
Cell phone	Building relationship with counselor	34.7%	1.9
Social networking	Informational (and forms)	32.3%	2.2
Video content	Campus tours at a distance	29.9%	2.4
Social networking	Notification of application info & deadlines	26.7%	2.0
Blog	Learning "what's happening" on campus	22.7%	2.1
Video content	Learning "what's happening" on campus	20.4%	2.3
Social networking	Building relationship with counselor	17.4%	1.8
Audio content	Building relationship with counselor	16.0%	2.1

Another way to assess the data is to identify which technologies are rated as useful within each of the specific uses. Table 2 shows that the school Web site and email are rated as the two most useful technologies for three of these uses (notification of acceptance, notification of application information and deadlines and information). The remaining three uses (building relationship with the admission counselor, campus tour at a distance and finding out "what's happening" on campus) have either the school Web site or email as the most useful technology, and have video or audio content as the second most useful technology. Just over half of the technologies listed have a rating of less than "2" indicating a usefulness between *none* and *sometimes*.

The numbers of students experiencing these technologies and the perceived usefulness of each is even more striking as seen in Chart 1. This chart shows that school Web sites, email and, to a lesser degree, cell phones, are the primary technologies experienced by students. It is evident that the least used technologies for institutions tend to be the "newer" technologies, which are most commonly used, and most likely favored, by the Millennial generation. Finally, virtually all students rate school Web sites and email as *somewhat* to *very* useful. The remaining technologies (excluding school Web sites and email) are rated *somewhat* to *very* useful by a slight to moderate majority of the students. This rating does leave a number of students rating it as *not useful,* and indicating room for improvement in the usefulness of these technologies as students currently experience them.

Students who did not experience uses of a particular technology in their admission process were asked to estimate how useful this technology *would have been* if they had experienced it during the recruiting process. The usefulness estimates by these students were very similar to the usefulness ratings by the students who *did* have experience with the technology, listing school Web sites and email among the most useful technologies.

Students were also asked if there were any other technologies, not listed, that would have benefited them during the admission process. Out of 20 replies three students mentioned a desire for mobile computing options (specifically iPhone applications), six stated the US mail, and 11 named technologies already covered in the survey (primarily email).

Discussion

Two themes emerged from the results of this survey: the *quantity* of technologies experienced and the *quality* of those experiences.

Table 2: Perceived Usefulness of Technologies for Specific Uses in the Admission Process as Rated by Students Experiencing These Technologies

Specific use	Technology	Perceived usefulness by students experiencing (1=None, 2=Some, 3=Very)
Notification of acceptance	School Web site	2.9
	Email	2.6
	Cell Phone	2.1
	Text Message	1.8
	Social Networking	1.8
	Virtual Community	1.7
	Instant Messaging	1.7
	Podcast/Audio	1.7
	Video Content	1.7
Notification of application info & deadlines	School Web site	2.8
	Email	2.7
	Social Networking	2.0
	Cell Phone	1.9
	Blog	1.8
	Video Content	1.8
	Text Message	1.8
	Instant Messaging	1.8
	Virtual Community	1.7
	Audio Content	1.7
Building relationship with counselor	Email	2.5
	Audio Content	2.0
	Cell Phone	1.9
	Social Networking	1.8
	Virtual Community	1.7
	Instant Messaging	1.7
	Text Messaging	1.6
Campus tours at a distance	School Web site	2.6
	Video Content	2.4
Informational (and forms)	School Web site	2.8
	Email	2.6
	Social Networking	2.2
	Cell Phone	2.1
	Audio Content	1.9
	Instant Messaging	1.9
	Virtual Community	1.8
	Video Content	1.8
	Text Message	1.7
Learning "what's happening" on campus	School Web site	2.6
	Video Content	2.2
	Blog	2.1

Quantity: Highest Use in Established Technologies

The technologies most often experienced by these students were the more established technologies of school Web sites, email and (cell) phones. In a related study, admission directors were asked what technologies they used most often in the admission process and they indicated school Web site, email and cell phones (Lindbeck and Fodrey, 2009). There is a clear link between the technologies admission offices and prospective students are using most. What is not clear is why these are the most prevalent technologies. It may be because admission offices are intentionally using more proven technologies, rather than more recent or emerging technologies. Or perhaps it is an unintentional lack of use because admission offices are less familiar with how to effectively integrate these newer technologies into the admission process (Lindbeck and Fodrey 2009). Regardless of the reason, there appears to be a division between the Millennial student's familiar and common use of "new" technologies and what they experience as they search for a college or university.

By making a conscious effort to increase the use of newer technologies and integrating them into the admission process we have the potential to offer information and features about our institutions in a way that the Millennial student prefers to consume it, making it easier for the student to connect with our institutions. It is also possible to take advantage of the collaborative and interactive nature of these newer (Web 2.0) technologies in order to build relationships between student and admission counselors.

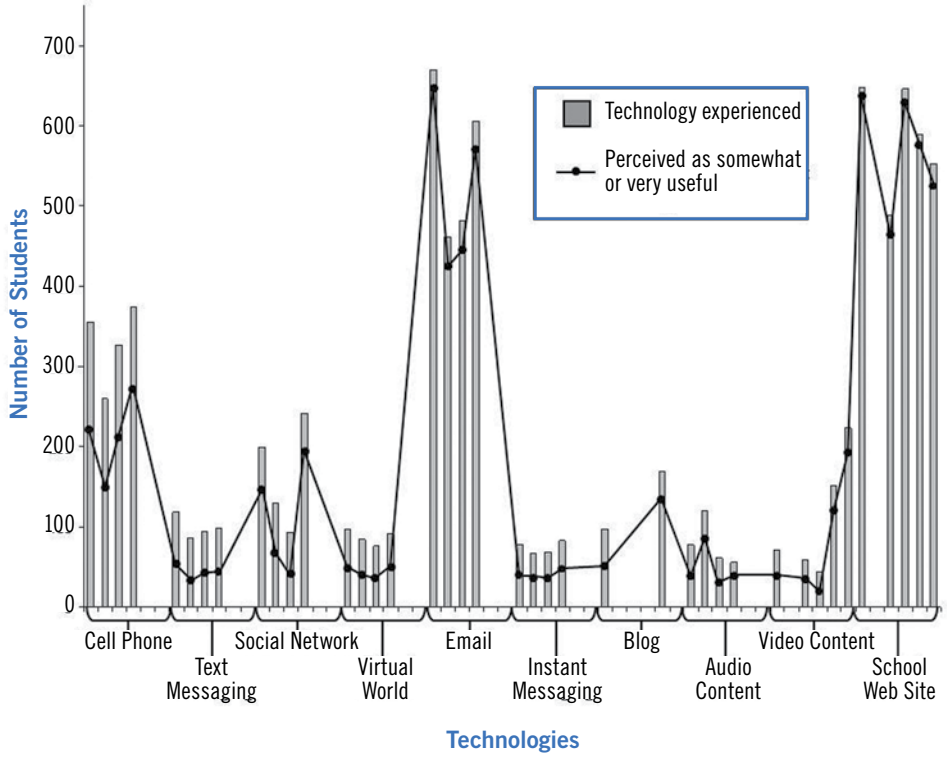
Quality: Moderate Usefulness of Currently Used Technologies

The results show mixed usefulness ratings for *all* technologies discussed. On the tables and the chart we clearly see an opportunity to raise the usefulness of cell phone, text messaging, social networking, virtual worlds, instant messaging, blogs and audio and video content. Yet, even within school Web sites and email, the technologies rated as most useful, there is the opportunity for improvement. School Web sites show a high combined *somewhat* and *very* rating (Chart 1), but 100-200 of each of those ratings were students who found the school Web sites only *somewhat* useful. The same is true of email where 25 to 40 percent of the combined *somewhat* and *very* ratings are from students rating it as *somewhat* useful.

As a result, we are presented with two opportunities to improve our use of existing technologies in the admission process. First, we have a chance to improve the usefulness of newer (Web 2.0) technologies and, second, we can improve the usefulness of the technologies already perceived as *somewhat* to *very* useful (school Web sites, email).

We need to think inside the box to improve and maximize our use of current practices and technology, and we need to think outside the box to bring in new practices and ways of using technology to maximize our recruitment and admission performance.

Chart 1. Technology Experienced by Students during the Admission Process and Perceived Usefulness in School Selection



The earlier survey of 36 admission offices also indicated a perceived low return on investment (ROI) on time and energy in all of the technologies used throughout the admission process (Lindbeck and Fodrey 2009). Certainly, recognition of current practices as not providing the expected ROI is an important first step toward improving and innovating the use of these technologies. And, of course, these innovations do not need to come only from the admission office leadership: collaborating within the office, as well as with students and others on campus may be the best way to improve the usefulness and integration of all technologies used in the recruitment process.

Implications for Additional Research

This inquiry offers several opportunities for additional research. First, a small geographically homogenous convenience sample was used in this inquiry. So, although the results raise some interesting ideas, they are not representative of the admission experience for all students. Extending this inquiry to a larger number of students at more diverse institutions will complete the picture of students' experiences with technology in the admission process. Second, by focusing solely on incoming freshmen, this inquiry was based on characteristics related to the Millennial generation. We have made strides to understand

the many variables associated with this group of students, however, additional knowledge and understanding of how they perceive the admission process will allow us to better serve and connect with them in the future. Finally, a more detailed inquiry into the specific interactions with technologies experienced by prospective students during the admission process will provide even more clarity into what is of use to them and allow us to continue to improve and develop our practices.

Implications for Practice

Just as recruiting and admission processes need to evolve and improve to continue to meet the changing needs and desires of prospective students, so, too, does our use of technology. We need to think *inside the box* to improve and maximize our use of current practices and technology and think *outside the box* to bring in practices, ideas and uses of technologies in new ways to maximize our recruitment and admission performance.

There are many barriers to innovation and improvement: current processes and practices employed by our respective institutions, our own comfort and understanding of newer technologies, our willingness to innovate, and the time and resources we have available. But there are also many enablers to innovation: our understanding of the current generation of prospective students, our research and professionalism in the field, our experiences and our "gut", our willingness to improve, and our desire to best serve students and our institutions. Innovation does not require us to turn our back on traditional and existing practices. But by turning 30-90- or 120-degrees, we can find a new view filled with possibilities. It is from this that we will find innovative and competitive admission strategies that integrate technology and best serve our prospective student population.

REFERENCES

Coburn, Karen Levin. 2006, July. Organizing a ground crew for today's helicopter parents. *About Campus* 11, no. 3: 9-16.

Chimes, Michael, and Sean Gordon. 2008. What Works: A Student and Counselor Explore College Recruitment. *Journal of College Admission*, no. 199 (Spring): 26-30.

Elam, Carol, Terry Stratton, and Denise D. Gibson. 2007. Welcoming a New Generation to College: The Millennial Students. *Journal of College Admission*, no. 195 (Spring): 20-25.

Farrell, Elizabeth. 2007. Tangled Up in Tech. *Chronicle of Higher Education*, March 16. 53 (28): A36.

Gastwirth, David. 2007. Reaching the Connected Generation. *New England Journal of Higher Education* 22 (2): 26-27.

Hagevik, Sandra. 1999. From Ozzie and Harriet to the Simpsons. *Journal of Environmental Health* 61(9): 39.

Hussar, William and Tabitha Bailey. 2007. Projection of Education Statistics to 2016. Institute of Education Sciences. http://nces.ed.gov/programs/projections/projections2016/app_a.asp

Lancaster, Lynne, and David Stillman. 2002. *When Generations Collide.* New York: HarperCollins.

Lindbeck, Robin and Brian Fodrey. 2009, Summer. "Using Technology In Undergraduate Admissions: Current Practices and Future Plans." *Journal of College Admission*, no. 204 (Summer): 25-30.

Noel-Levitz. 2009. Scrolling Toward Enrollment Web Site Content and the E-Expectations of College-Bound Seniors. https://www.noellevitz.com/NR/rdonlyres/6A70AE0B-6D99-4AA9-8AED-94C7649EC052/0/EExpScrollingTowardEnrollment09.pdf

Raines, Claire. 2003. Managing Millennials. In *Connecting Generations: The Sourcebook for a New Workplace.* Menlo Park: Crisp Publications.

Rich, Martin. 2008. Millennial Students and Technology Choices for Information Searching. Electronic *Journal of Business Research Methods* 6(1): 73-76.

Squire, Kurt, and Constance Steinkuehler. 2005. MEET THE GAMERS. (Cover story). *Library Journal.* 130(7): 38-41.

Strauss, William and Neil Howe. 2007. *Millennials Go to College* (2nd Ed.) Great Falls: Life Course Associates.

Tucker, Patrick. 2006. Teaching the Millennial Generation. *Futurist* 40, 1(7). MAS Ultra – School Edition.

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